



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,388	02/06/2004	Shigenobu Nakamura	118604	6780
25944	7590	12/19/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			PRESTON, ERIK D	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/772,388

Applicant(s)

NAKAMURA ET AL.

Examiner

Erik D. Preston

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 3-5, 7-9 and 12-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 02/06/2004.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Specification*

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,6 & 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito et al. (US 4232238).

With respect to claim 1, Saito teaches an AC generator for a vehicle comprising: A rotor (Fig. 2, #2); a stator (Fig. 2, #1) opposed to the rotor and having an output lead (as seen in Fig. 2); a rectifying device (Fig. 3, #5a) connecting to the output lead of the stator; a regulator (Fig. 1, #6) that controls output voltage; a common connector (Fig. 3, #15) including internal terminals that connect the regulator with an internal circuit of at least one of the rectifying device and the rotor; and an individual connector (Fig 3, #7a & 7b) connected to the common connector, the individual connector including external terminals that receive and transmit electric signals from and to an external circuit, wherein the common conductor and the individual conductor further include intermediate terminals contacting with each other and engaging portions engaging with each other, the engaging portions being formed of projections and recesses (as seen in

Art Unit: 2834

Fig. 2, the individual connector is a projection, and the common connector contains recesses through which the individual connector protrudes).

With respect to claim 2, Saito teaches the AC generator of claim 1, wherein the common connector is connectable with each of a plurality of individual connectors having different shapes (as seen in Fig. 3).

With respect to claim 6, Saito teaches the AC generator of claim 1, wherein each of the intermediate terminals of the common connector and each of the intermediate terminals of the individual connector are opposed to and paired with each other.

With respect to claim 10, Saito teaches the AC generator of claim 1, wherein the number of intermediate terminals of the common connector is equal to or greater than that of the individual connector.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (US 4232238) in view of Shibata et al. (JP 08-085402). Saito teaches the AC generator of claim 1, but it does not teach that the regulator is mounted on the individual connector. However, Shibata teaches placing IC elements on a connector (Fig. 7, #9). It would have been obvious to one of ordinary skill in the art at the time of the invention

Art Unit: 2834

to modify the regulator of Saito in view of the connector as taught by Shibata because it allows for better cooling of the IC elements (Shibata, Abstract).

***Allowable Subject Matter***

Claims 3-5, 7-9 & 12-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 3, while prior art does teach claim 2, it does not teach a plurality of individual connectors having different shapes.

With respect to claim 4, while prior art does teach claim 1, it does not teach first and second engaging portions in the radial and axial directions respectively.

With respect to claim 5, while prior art does teach claim 1, it does not teach the common connector having projections.

With respect to claim 7, while prior art does teach claim 6, it does not teach one intermediate terminal being straight, and its opposite intermediate terminal being bent.

With respect to claims 8 & 9, while prior art does teach claim 1, it does not teach removable intermediate terminals.

With respect to claim 12, while prior art does teach the claim 1, it does not teach first and second engaging portions parallel and perpendicular to the intermediate terminals.

Claims 13 & 14 are dependent upon above claims.

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2507242, US 3210578, US 4100440, US 5821674 & US 6818825

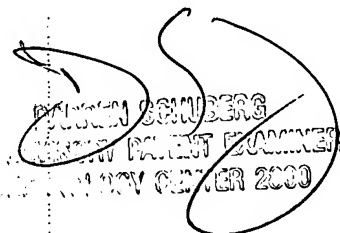
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik D. Preston whose telephone number is (571)272-8393. The examiner can normally be reached on Monday through Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



12/05/2005



DARREN SCHUBERG  
SENIOR PATENT EXAMINER  
EBC CENTER 2000